Recreation

The soils of the survey area are rated in the following tables according to limitations that affect their suitability for recreation. The ratings are both verbal and numerical. Rating class terms indicate the extent to which the soils are limited by all of the soil features that affect the recreational uses. Not limited indicates that the soil has features that are very favorable for the specified use. Good performance and very low maintenance can be expected. Slightly limited indicates that the soil has features that are favorable for the specified use. The limitations are minor and can be easily overcome. Good performance and low maintenance can be expected. Somewhat limited indicates that the soil has features that are moderately favorable for the specified use. The limitations can be overcome or minimized by special planning, design, or installation. Fair performance and moderate maintenance can be expected. Very limited indicates that the soil has one or more features that are unfavorable for the specified use. The limitations generally cannot be overcome without major soil reclamation, special design, or expensive installation procedures. Poor performance and high maintenance can be expected.

Numerical ratings in the tables indicate the severity of individual limitations. The ratings are shown as decimal fractions ranging from 0.00 to 1.00. They indicate gradations between the point at which a soil feature has the greatest negative impact on the use (1.00) and the point at which the soil feature is not a limitation (0.00).

The ratings in the tables are based on restrictive soil features, such as wetness, slope, and texture of the surface layer. Susceptibility to flooding is considered. Not considered in the ratings, but important in evaluating a site, are the location and accessibility of the area, the size and shape of the area and its scenic quality, vegetation, access to water, potential water impoundment sites, and access to public sewer lines. The capacity of the soil to absorb septic tank effluent and the ability of the soil to support vegetation also are important. Soils that are subject to flooding are limited for recreational uses by the duration and intensity of flooding and the season when flooding occurs. In planning recreational facilities, onsite assessment of the height, duration, intensity, and frequency of flooding is essential.

The information in this table can be supplemented by other information in this survey, for example, interpretations for building site development, construction materials, sanitary facilities, and water management.

Camp areas require site preparation, such as shaping and leveling the tent and parking areas, stabilizing roads and intensively used areas, and installing sanitary facilities and utility lines. Camp areas are subject to heavy foot traffic and some vehicular traffic. The ratings are based on the soil properties that affect the ease of developing camp areas and the performance of the areas after development. Slope, stoniness, and depth to bedrock or a cemented pan are the main concerns affecting the development of camp areas.

The soil properties that affect the performance of the areas after development are those that influence trafficability and promote the growth of vegetation, especially in heavily used areas. For good trafficability, the surface of camp areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Picnic areas are subject to heavy foot traffic. Most vehicular traffic is confined to access roads and parking areas. The ratings are based on the soil properties that affect the ease of developing picnic areas and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of picnic areas. For good trafficability, the surface of picnic areas should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and toxic substances in the soil.

Playgrounds require soils that are nearly level, are free of stones, and can withstand intensive foot traffic. The ratings are based on the soil properties that affect the ease of developing playgrounds and that influence trafficability and the growth of vegetation after development. Slope and stoniness are the main concerns affecting the development of playgrounds. For good trafficability, the surface of the playgrounds should absorb rainfall readily, remain firm under heavy foot traffic, and not be dusty when dry. The soil properties that influence trafficability are texture of the surface layer, depth to a water table, ponding, flooding, permeability, and large stones. The soil properties that affect the growth of plants are depth to bedrock or a cemented pan, permeability, and to substances in the soil.

Paths and trails for hiking and horseback riding should require little or no slope modification through cutting and filling. The ratings are based on the soil properties that affect trafficability and erodibility. These properties are stoniness, depth to a water table, ponding, flooding, slope, and texture of the surface layer.

Golf fairways are subject to heavy foot traffic and some light vehicular traffic. Cutting or filling may be required. Irrigation is not considered in the ratings. The ratings are based on the soil properties that affect plant growth and trafficability after vegetation is established. The properties that affect plant growth are reaction; depth to a water table; ponding; depth to bedrock or a cemented pan; the available water capacity in the upper 40 inches; the content of salts, sodium, or calcium carbonate; and sulfidic materials. The properties that affect trafficability are flooding, depth to a water table, ponding, slope, stoniness, and the amount of sand, clay, or organic matter in the surface layer. The suitability of the soil for traps, tees, roughs, and greens is not considered in the ratings.

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds		
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
003DB: Dennis	85	Very limited Depth to saturated zone Restricted permeability	1.00	Somewhat limited Restricted permeability Depth to saturated zone	0.94	Very limited Depth to saturated zone Restricted permeability Slope	1.00 0.94 0.13	
003EC: Eram	90	Very limited Depth to saturated zone Restricted permeability	1.00	Very limited Depth to saturated zone Restricted permeability	1.00	Very limited Depth to saturated zone Slope Restricted	1.00 1.00 0.94	
003LA:						permeability Depth to bedrock	0.20	
Lanton	85	Very limited Flooding Depth to saturated zone Restricted permeability	1.00	Somewhat limited Restricted permeability Depth to saturated zone	0.94	Somewhat limited Depth to saturated zone Restricted permeability Flooding	0.98	
031EC: Eram	90	Very limited Depth to saturated zone Restricted permeability	1.00	Very limited Depth to saturated zone Restricted permeability	1.00	Very limited Depth to saturated zone Restricted permeability Slope Depth to bedrock	1.00 0.94 0.87 0.29	
139CM: Clareson	55	Somewhat limited Restricted permeability Slope	0.84	Somewhat limited Restricted permeability Slope	0.84	Very limited Slope Depth to bedrock Restricted permeability	1.00 0.90 0.84	
Eram	30	Very limited Depth to saturated zone Restricted permeability	1.00	Very limited Depth to saturated zone Restricted permeability	1.00	Content of large stones Very limited Depth to saturated zone Slope	1.00	
602CB:		Slope	0.00	Slope	0.00	Restricted permeability Depth to bedrock	0.94	
Catoosa 602CM:	85	Not limited		Not limited		Somewhat limited Slope	0.00	
Clareson	60	Somewhat limited Restricted permeability Slope	0.94	Somewhat limited Restricted permeability Slope	0.94	Very limited Slope Restricted permeability Depth to bedrock Content of large	1.00 0.94 0.20 0.20	
Rock Outcrop	20	Not rated		Not rated		stones Not rated		
602LA: Lanton	90	Very limited Depth to saturated zone Flooding	1.00	Very limited Depth to saturated zone Restricted permeability	1.00	Very limited Depth to saturated zone Flooding	1.00	
602VC:		Restricted permeability	0.15			Restricted permeability	0.15	
Verdigris	85	Very limited Flooding	1.00	Somewhat limited Flooding	0.40	Very limited Flooding	1.00	
Clareson	60	Somewhat limited Restricted permeability	0.60	Somewhat limited Restricted permeability	0.60	Very limited Slope	1.00	
		Slope	0.04	Slope	0.04	Restricted permeability Depth to bedrock	0.60	

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds		
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
Rock Outcrop	20	Not rated		Not rated		Content of large stones Not rated	0.20	
2326: Kenoma	90	Very limited Depth to saturated zone Restricted permeability	1.00	Very limited Restricted permeability Depth to saturated zone	1.00	Very limited Depth to saturated zone Restricted permeability Slope	1.00 1.00 0.13	
2540: Leanna	85	Very limited Depth to saturated zone Flooding Restricted permeability	1.00 1.00 1.00	Very limited Depth to saturated zone Restricted permeability	1.00	Very limited Depth to saturated zone Restricted permeability Flooding	1.00 1.00 0.60	
3494: Summit	85	Somewhat limited Restricted permeability	0.94	Somewhat limited Restricted permeability	0.94	Somewhat limited Restricted permeability Slope	0.94	
3815: Verdigris	85	 Very limited Flooding	1.00	Somewhat limited Flooding	0.40	 Very limited Flooding	1.00	
3816: Verdigris	90	 Very limited Flooding	1.00	Not limited		 Somewhat limited Flooding	0.60	
3951: Woodson	85	Very limited Depth to saturated zone Restricted permeability	1.00	Very limited Depth to saturated zone Restricted permeability	1.00	Very limited Depth to saturated zone Restricted permeability Slope	1.00	
AED: Arents, Earthen Dam-	100	Not rated		Not rated		Not rated		
Bc: Bates	90	Not limited		Not limited		Somewhat limited Depth to bedrock Slope	0.42	
Bd: Bates	50	Not limited		Not limited		Somewhat limited Slope	0.87	
Collinsville	35	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock	1.00	Depth to bedrock Very limited Depth to bedrock Slope Content of large stones	1.00	
Bh: Bates	50	Somewhat limited Slope	0.00	Somewhat limited Slope	0.00	Very limited Slope Depth to bedrock	1.00	
Collinsville	35	Very limited Depth to bedrock Slope	1.00	Very limited Depth to bedrock Slope	1.00	Very limited Slope Depth to bedrock Content of large stones	1.00	
Bo: Bolivar	65	Not limited		Not limited		Somewhat limited Slope	0.50	
Hector	25	Very limited Depth to bedrock	1.00	Very limited Depth to bedrock	1.00	Depth to bedrock Very limited Depth to bedrock Slope Gravel content	0.16 1.00 0.50 0.06	
Bs: Bolivar	50	Somewhat limited Slope	0.04	Somewhat limited Slope	0.04	Very limited Slope	1.00	
Hector	40	Very limited Depth to bedrock Slope	1.00	Very limited Depth to bedrock Slope	1.00	Depth to bedrock Very limited Depth to bedrock Slope Gravel content	1.00 1.00 0.06	

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds		
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
Cm: Clareson	55	Somewhat limited Restricted permeability Slope	0.94	Somewhat limited Restricted permeability Slope	0.94	Very limited Slope Restricted permeability Depth to bedrock	1.00	
Eram	30	Very limited Depth to saturated zone Restricted permeability Slope	1.00	Very limited Depth to saturated zone Restricted permeability Slope	1.00	Content of large stones Very limited Depth to saturated zone Slope Restricted permeability	1.00 1.00 0.94	
Dc: Dennis	90	Very limited Depth to saturated zone Restricted permeability	1.00	Very limited Depth to saturated zone Restricted permeability	1.00	Depth to bedrock Very limited Depth to saturated zone Restricted permeability Slope	0.01 1.00 0.94 0.50	
Dn: Dennis		Very limited Depth to saturated zone Restricted permeability	1.00	Somewhat limited Restricted permeability Depth to saturated zone	0.94	Very limited Depth to saturated zone Restricted permeability Slope	1.00 0.94 0.50	
Bates Do:	30	Not limited		Not limited		Somewhat limited Slope Depth to bedrock	0.50 0.16	
Dennis, eroded Bates, eroded		Very limited Depth to saturated zone Restricted permeability Not limited	1.00	Somewhat limited Restricted permeability Depth to saturated zone Not limited	0.94	Very limited Depth to saturated zone Restricted permeability Slope Somewhat limited Slope	1.00 0.94 0.87 0.87 0.16	
Ea: Eram	55	Very limited Depth to saturated zone Restricted permeability Slope	1.00 0.96 0.16	Very limited Depth to saturated zone Restricted permeability Slope	1.00 0.96 0.16	Depth to bedrock Very limited Depth to saturated zone Slope Restricted	1.00	
Lebo	35	Somewhat limited Slope	0.16	Somewhat limited Slope	0.16	permeability Depth to bedrock Very limited Slope Depth to bedrock		
Ec: Eram	60	Very limited Depth to saturated zone Restricted permeability	1.00	Very limited Depth to saturated zone Restricted permeability	1.00	Very limited Depth to saturated zone Restricted permeability Slope	1.00 0.94 0.87	
Lula	25	Not limited		Not limited		Depth to bedrock Somewhat limited Slope	0.01	
Aquolls	100	Very limited Depth to saturated zone Restricted permeability Ponding	1.00	Very limited Depth to saturated zone Restricted permeability Ponding	1.00	Very limited Restricted permeability Depth to saturated zone Ponding	1.00	
Ke: Kenoma	90	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability Slope	1.00	
Le: Leanna, drained	90	Very limited Flooding	1.00	Very limited Restricted permeability	1.00	Very limited Restricted permeability	1.00	

Map symbol and soil name				Picnic areas		Playgrounds		
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
		Restricted permeability Depth to saturated zone	1.00	Depth to saturated zone	0.94	Depth to saturated zone Flooding	1.00	
Ln: Lebo	75	Very limited Slope Content of large stones	1.00	Very limited Slope Content of large stones	1.00	Very limited Slope Content of large stones Gravel content	1.00 1.00 0.90	
Rock Outcrop	15	Not rated		Not rated		Depth to bedrock Not rated	0.65	
Lo: Lula LU:	90	Not limited		Not limited		Not limited		
Lula	85	Not limited		Not limited		Somewhat limited Slope	0.00	
M-W: Miscellaneous Water-	100	Not rated		Not rated		Not rated		
Mb: Mason	90	Very limited Flooding	1.00	Somewhat limited Restricted permeability	0.15	Somewhat limited Restricted permeability	0.15	
0-1		Restricted permeability	0.15					
Oe: Olpe	55	Somewhat limited Restricted permeability	0.15	Somewhat limited Restricted permeability	0.15	Somewhat limited Restricted permeability Slope	0.15	
Kenoma	30	Very limited Depth to saturated zone Restricted permeability	1.00	Very limited Restricted permeability Depth to saturated zone	1.00	Gravel content Very limited Depth to saturated zone Restricted permeability Slope	1.00 1.00 0.13	
Os: Osage	85	Very limited Depth to saturated zone Flooding Restricted permeability	1.00	Very limited Depth to saturated zone Restricted permeability	1.00	Very limited Depth to saturated zone Restricted permeability Flooding	1.00	
Ov: Osage	90	Very limited Depth to saturated zone Flooding Ponding Restricted permeability Too clayey	1.00 1.00 1.00 1.00	Very limited Ponding Depth to saturated zone Restricted permeability Too clayey	1.00 1.00 1.00 1.00	Restricted permeability Too clayey	1.00 1.00 1.00 1.00 0.60	
Pt: Pits, Quarries	100	Not rated	1.00	Not rated		Flooding Not rated	0.60	
Sn: Summit	100	Somewhat limited Restricted permeability	0.94	Somewhat limited Restricted permeability	0.94	Somewhat limited Restricted permeability Slope	0.94	
So: Summit	90	Somewhat limited Restricted permeability Depth to saturated zone	0.94	Somewhat limited Restricted permeability Depth to saturated zone	0.94	Somewhat limited Restricted permeability Slope Depth to saturated zone	0.94 0.87 0.39	
Vb: Verdigris	85	 Very limited Flooding	1.00	Not limited		 Somewhat limited Flooding	0.60	
Vc: Verdigris	88			Somewhat limited		 Very limited		

Map symbol and soil name	Pct of map unit	Camp areas		Picnic areas		Playgrounds		
		Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	
W: Water	100	Flooding Not rated	1.00	Flooding Not rated	0.40	Flooding Not rated	1.00	
Wb: Welda	90	Somewhat limited Restricted permeability	0.15	Somewhat limited Restricted permeability	0.15	Somewhat limited Slope Restricted permeability	0.50	
Wo: Woodson	90	Very limited Restricted permeability Depth to saturated zone	1.00	Very limited Restricted permeability Depth to saturated zone	1.00	Very limited Restricted permeability Depth to saturated zone	1.00	
Wt: Woodson	100	Very limited Restricted permeability Depth to saturated zone	1.00	Very limited Restricted permeability Depth to saturated zone	1.00	Very limited Restricted permeability Depth to saturated zone Slope	1.00	

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways		
		Rating class and limiting features	Value	Rating class and limiting features	Value	
003DB: Dennis	85	Somewhat limited Depth to saturated zone	0.86	Somewhat limited Depth to saturated zone	0.94	
003EC: Eram	90	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Depth to bedrock	1.00	
003LA: Lanton	85	Somewhat limited Depth to saturated zone	0.44	Somewhat limited Depth to saturated zone Flooding	0.75	
031EC: Eram	90	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Depth to bedrock	1.00	
139CM: Clareson	55	Not limited		Somewhat limited Depth to bedrock Droughty Content of large stones	0.90 0.29 0.20	
Eram	30	Very limited Depth to saturated zone	1.00	Slope Very limited Depth to saturated zone Depth to bedrock Slope	0.04 1.00 0.65 0.00	
602CB: Catoosa	85	Not limited		Somewhat limited Depth to bedrock	0.84	
602CM: Clareson	60	Not limited		Somewhat limited Slope Depth to bedrock Content of large stones	0.37 0.20 0.20	
Rock Outcrop	20	Not rated		Droughty Not rated	0.04	
602LA: Lanton	90	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00	
602VC: Verdigris	85	Somewhat limited Flooding	0.40	Very limited Flooding	1.00	
1366: Clareson	60	Not limited		Somewhat limited Depth to bedrock Content of large stones Slope	0.20 0.20 0.04	
Rock Outcrop	20	Not rated		Droughty Not rated	0.00	
2326: Kenoma	90	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	
2540: Leanna	85	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone Flooding	1.00	
3494: Summit 3815:		Not limited		Not limited		
Verdigris 3816:	85	Somewhat limited Flooding	0.40	Very limited Flooding	1.00	
Verdigris	90	Not limited		Somewhat limited Flooding	0.60	

Map symbol and soil name	Pct of map unit	Paths and trails		Golf fairways		
		Rating class and limiting features	Value	Rating class and limiting features	Value	
3951: Woodson	85	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	
AED: Arents, Earthen Dam-	100	Not rated		Not rated		
Bc: Bates	90	Not limited		Somewhat limited Depth to bedrock	0.42	
Bd: Bates	50	Not limited		Somewhat limited	0.65	
Collinsville	35	Not limited		Depth to bedrock Very limited Depth to bedrock Droughty Content of large stones	1.00 0.98 0.03	
Bh: Bates Collinsville		Not limited Not limited		Somewhat limited Depth to bedrock Slope Very limited	0.16	
Det				Depth to bedrock Droughty Slope Content of large stones	1.00 0.73 0.16 0.03	
Bo: Bolivar	65	Not limited		Somewhat limited Depth to bedrock	0.16	
Hector	25	Not limited		Very limited Depth to bedrock Droughty	1.00	
Bs: Bolivar	50	Not limited		Somewhat limited Depth to bedrock Slope	0.16	
Hector	40	Not limited		Very limited Depth to bedrock Droughty Slope	1.00 0.98 0.04	
Cm: Clareson	55	Not limited		Somewhat limited Depth to bedrock Droughty Content of large stones	0.80 0.31 0.20	
Eram	30	Very limited Depth to saturated zone	1.00	Slope Very limited Depth to saturated zone Depth to bedrock Slope	0.04 1.00 0.01 0.00	
Dc: Dennis	90	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	
Dn: Dennis	60	Somewhat limited Depth to saturated zone	0.86	Somewhat limited Depth to saturated zone	0.94	
Bates	30	Not limited		Somewhat limited Depth to bedrock	0.16	
Do: Dennis, eroded	60	Somewhat limited Depth to saturated zone	0.86	Somewhat limited Depth to saturated zone	0.94	
Bates, eroded	30	Not limited		Somewhat limited Depth to bedrock	0.16	
Ea: Eram	55	Very limited Depth to saturated zone	1.00	Very limited Depth to saturated zone	1.00	
Lebo	35	Not limited		Slope Depth to bedrock Somewhat limited Depth to bedrock Slope	0.16 0.01 0.65 0.16	

Map symbol and soil name	Pct of map	Paths and trails	5	Golf fairways	
	unit	Rating class and limiting features	Value	Rating class and limiting features	Value
Ec: Eram	60	Very limited Depth to saturated zone Not limited	1.00	Very limited Depth to saturated zone Depth to bedrock Not limited	1.00
INT: Aquolls	100	Very limited Depth to saturated zone Ponding	1.00	Very limited Depth to saturated zone Ponding	1.00
Ke: Kenoma	90	Not limited		Not limited	
Le: Leanna, drained	90	Somewhat limited Depth to saturated zone	0.86	Somewhat limited Depth to saturated zone Flooding	0.94
Ln: Lebo	75	Very limited Slope Content of large stones	1.00	Very limited Slope Content of large stones	1.00
Rock Outcrop	15	Not rated		Depth to bedrock Droughty Not rated	0.65
Lo: Lula LU:	İ	Not limited		Not limited	
Lula M-W:	İ	Not limited		Not limited	
Miscellaneous Water-	100	Not rated		Not rated	
Mb: Mason Oe:	90	Not limited		Not limited	
Olpe Kenoma	30	Not limited Very limited Depth to	1.00	Somewhat limited Droughty Very limited Depth to	0.96
Os: Osage	85	saturated zone Very limited Depth to saturated zone	1.00	saturated zone Very limited Depth to saturated zone Flooding	1.00
Ov: Osage	90	Very limited Depth to saturated zone	1.00	Very limited Ponding	1.00
		Ponding Too clayey	1.00	Depth to saturated zone Too clayey Flooding	1.00
Pt: Pits, Quarries	100	Not rated		Not rated	
Sn: SummitSo:	100	Not limited		Not limited	
Summit	90	Not limited		Somewhat limited Depth to saturated zone	0.19
Vb: Verdigris Vc:	85	Not limited		Somewhat limited Flooding	0.60
Verdigris	88	Somewhat limited Flooding	0.40	Very limited Flooding	1.00
Water	100	Not rated		Not rated	
Wb: Welda Wo:	İ	Not limited		Not limited	
Woodson	90	Somewhat limited	I	Somewhat limited	

Map symbol and soil name	Pct of map unit	Paths and trail:	S	Golf fairways		
		Rating class and limiting features	Value	Rating class and limiting features	Value	
Wt:		Depth to saturated zone	0.86	Depth to saturated zone	0.94	
Woodson	100	Somewhat limited Depth to saturated zone	0.86	Somewhat limited Depth to saturated zone	0.94	